Species

22(69), 2021

Macrosolen capitellatus (Wight & Arn) Danser. (Loranthaceae): New addition to the flora of Odisha, India

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To Cite:
Mishra AK, Devi RS, Mishra S, Kumar S. *Macrosolen capitellatus* (Wight & Arn) Danser. (Loranthaceae): New addition to the flora of Odisha, India. *Species,* 2021, 22(69), 67-70

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Peer-Review History
Received: 07 January 2021
Reviewed & Revised: 10/January/2021 to 05/February/2021
Accepted: 07 February 2021
Published: February 2021

Peer-Review Model
External peer-review was done through double-blind method.

DISCOVERY
SCIENTIFIC SOCIETY

ABSTRACT

A new distribution of *Macrosolen capitellatus,* a parasitic plant species has been recorded from the state Odisha, India. The morphological description, taxonomical note, phenology, ecology is provided for easy identification in field.

Key words *-Macrosolen capitellatus,* New distribution, Mayurbhanj, Odisha

INTRODUCTION

Loranthaceae family is the family that has the greatest number of mistletoes, a hemiparasitic shrub that attaches to the host stem. The family Loranthaceae possesses about 73 genera and over 900 species (Russell and Nickrent 2008; Low *et al*. 2017). In 1995, Barlow reported 23 genera and more than 200 species in the Malesian region of this family. The genus *Macrosolen* belonging to this family has about 40 species found in the world, 5 species in China (Wu et al. 2003). It is distributed in South Asia, Malaysia, Thailand, China, New Guinea and India. In 1931, Danser represented the key of *Macrosolen* genus and also described that it is a complex taxonomy with which the species limits are difficult to circumscribe. The genus shows a broad ecological tolerance with an active phase of differentiation (Barlow 1995; Danser 1931; Danser 1935; Singh *et al*. 2013). The genus *Marosolen* is often characterised with epicortical roots with all parts glabrous, leaves opposite and pinnately veined, 1 bract and 2 bracteoles subtending each flower; flower bisexual, 6-merous, mature flower bud tubular.

During a floristic study in August 2020, Rairangpur forest in the Mayurbhanj District of Odisha, authors made an observation on the unusual parasitic plant of the genus *Macrosolen*. The said species was collected for further taxonomical examination. After the critical analysis of the morphological characters of the specimen, authors concluded that the specimen was *Macrosolen capitellatus*, a species that is so far not reported from Odisha state. A brief taxonomical note of the collected species, photographs and associated flora is provided here (Figure 1 & 2).

MATERIALS AND METHODS

During the survey on the floristic studies in Rairangpur Forest, Mayurbhanj district, Odisha, India, a species of *Macrsolen* was collected from Badajhilli Village of Mayurbhanj District, Odisha and characterization of the morphological structures was carried out using the common method of plant taxonomy. Comparison was also done using virtual herbarium of JSTOR, GBIF, The Plant List. The brief description on the taxonomical note, photographs, phenology and associated flora are presented here.

Taxonomical Treatment

Parasitic shrubs based with the epicortical roots; leaves 5-8 x 2-3 cm opposite, pinnate venation, elliptic-lanceolate, acute apex, cuneate at base; nerves 2 or 3 pairs; petiole up to 7 mm long; peduncle ~10 mm long; bracts and bracteoles similar, ovate to orbicular; inflorescence often axillary and condensed racemose, having one bract with two bracteolate subtending each flower; flowers bisexual, hexamerous, actinomorphic, sometimes zygomorphic by the presence of single split. Flowers few together; calyx tube 4 mm long, truncate with short rounded lobes; corolla yellow to white or pink with base and apex green, split below the middle; calyx ovoid to ellipsoid, limb annular or cupular, persistent; mature flower bud tubular; corolla sympetalous, tube gradually dilated, usually 6-keeled in middle portion, then constricted abruptly to a neck and expanded to a clavate tip, lobes reflexed; filaments short; anthers 4-loculed, sometimes multilocellate. Fruits subglobose.

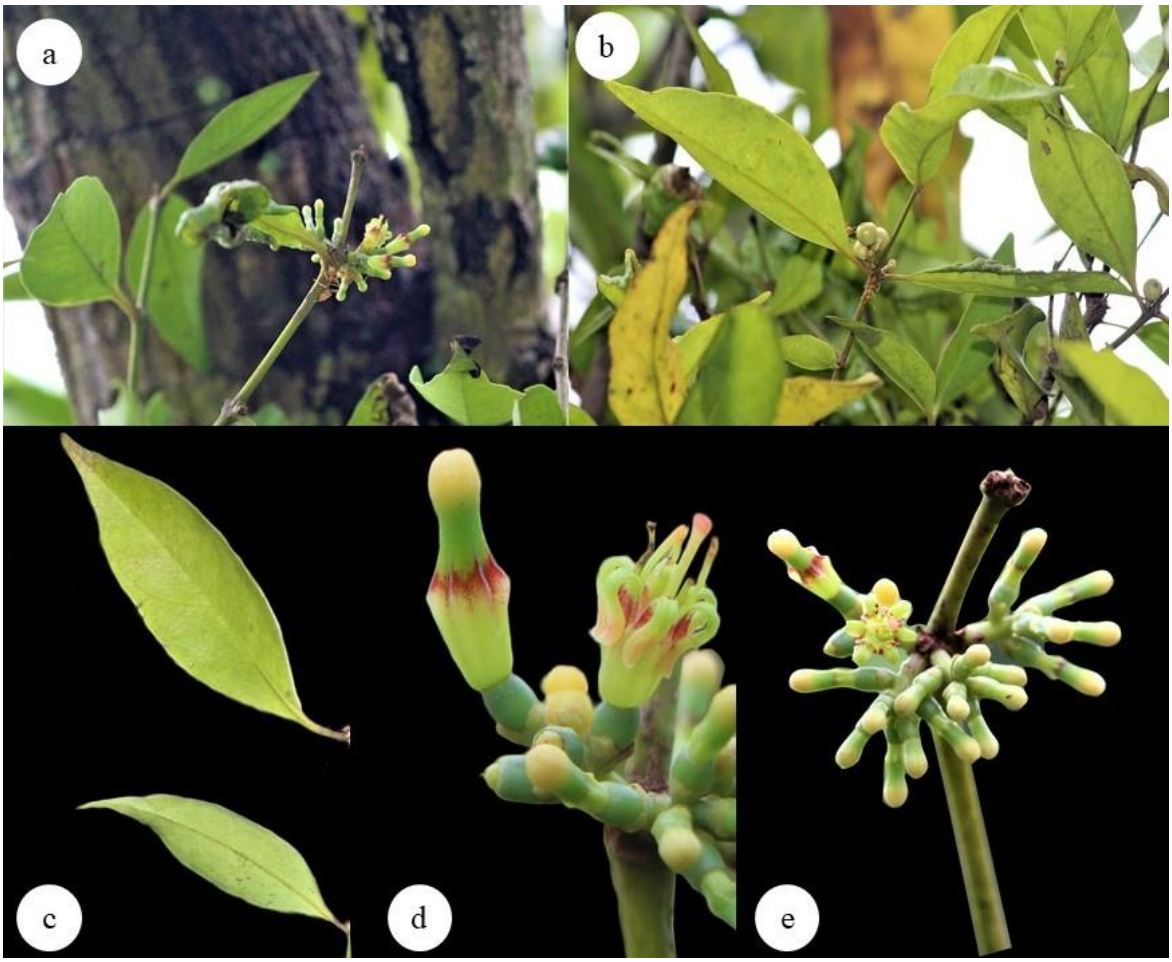

Figure 1: *Macrosolen capitellatus* a) Flowers b) Fruits c) Leaves d) Magnified flower e) Magnified condensed racemose inflorescence

ISSN 2319–5746 EISSN 2319–5754 I OPEN ACCESS

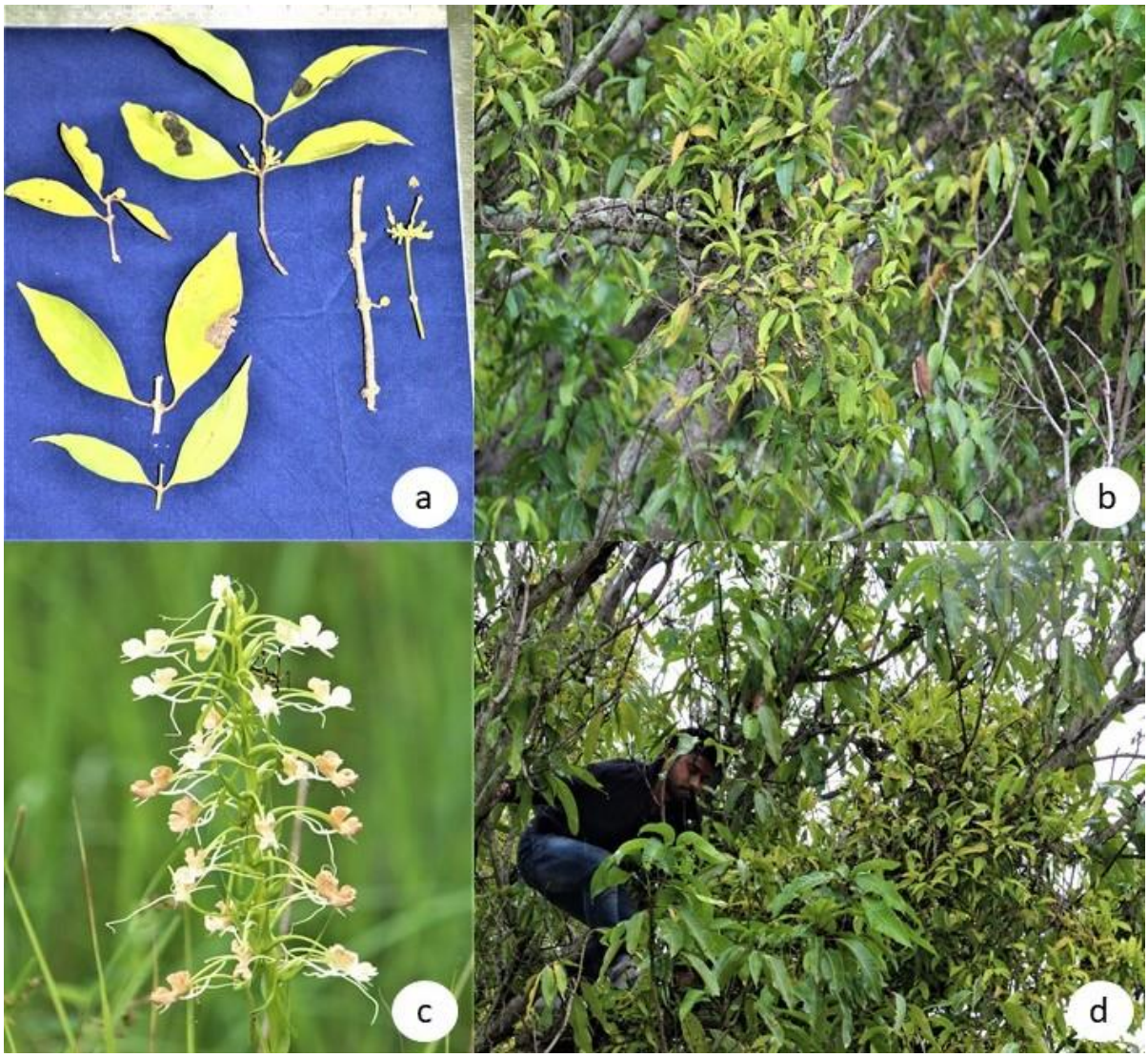

Figure 2: a) Characterization of *Macrosolen capitellatus* b) Habitat associated with *Mangifera indica* as host plant c) *Habenaria commelinifolia*, associated flora of *M. capitellatus* d) Collection of *M. capitellatus* specimen from its habitat

Distribution and habitat

It is distributed in Sri Lanka and south western India including Kerala, Karnataka and Maharashtra.

Flowering & Fruiting

August to September

Specimens examined

INDIA, Odisha, Mayurbhanj District, Badajhilli Village, Latitude 21º97'41.0"N, Longitude 86º18'60.5"E; Elevation 507 m; 25th August Sanjeet Kumar 36 .

Notes

The collected plant specimen is collected from Badajhilli Village, Rairangpur Forest Division, Mayurbhanj District. It was found to be associated with *Mangifera indica* as host plant near the paddy field associated with *Habenaria commelinifolia.*

Acknowledgement

Authors are thankful to the Forest and Environment Department, Government of Odisha, local people and team of APRF for their cooperation and coordination during the survey.

ISSN 2319–5746 EISSN 2319–5754 I OPEN ACCESS

Conflict of Interest

The authors declare that there are no conflicts of interests.

Ethical approval

The ethical guidelines for plants & plant materials are followed in the study for species collection & identification.

Funding

This study has not received any external funding.

Data and materials availability

All data associated with this study are present in the paper.

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ISSN 2319–5746 EISSN 2319–5754 I OPEN ACCESS